

# Excessive Sleepiness: Assessing Its Impact on Patient Wellness



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# Excessive Sleepiness: Assessing Its Impact on Patient Wellness

A Free, One-Hour CME/CNE/CEP/NASW/CCMC/CPE Satellite Broadcast

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## FACULTY

Mary B. O'Malley, MD, PhD

Daniel J. Buysse, MD

## psychCME Chair and Moderator

Prakash S. Masand, MD

## Syllabus and Course Guide

Presented by



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# Information for Participants

## Statement of Need

Adequate sleep is not an absolute entity based on quantitative hours of rest, but rather a measure of the rest and restoration experienced by an individual. The 2005 Sleep in America Poll conducted by the National Sleep Foundation found that 75% of adults say they have a sleep problem such as waking during the night or snoring, and 25% report that sleep problems have some impact on their daily lives. Yet, 70% of adults say that their doctors have never asked them about their sleep patterns. This indicates a significant lag in recognition, diagnosis, and treatment of sleep disturbances. Excessive sleepiness can have a myriad of undesirable consequences such as diminished interest in sexual relationships, poor executive functioning, increased motor vehicle accidents, and medical comorbidities. Excessive sleepiness can be attributed to insufficient sleep syndrome, obstructive sleep apnea, shift work sleep disorder, narcolepsy, and/or psychiatric or medical disorders. In this evidence-based psychCME TV activity, the faculty will explore the recognition and treatment of excessive sleepiness and pose strategies for improved patient outcomes.

## Activity Goal

To better recognize the impact of excessive sleepiness on patient wellness.

## Learning Objectives

At the end of this CE activity, participants should be able to:

- Identify factors contributing to excessive sleepiness and their impact on patient wellness.
- Utilize screening tools for recognition and diagnosis of excessive sleepiness.
- Assess the role of pharmacological and non-pharmacological interventions in the treatment of excessive sleepiness.

## Target Audience

Physicians, physician assistants, nurse practitioners, nurses, psychologists, social workers, certified case managers, pharmacists, and other healthcare professionals with an interest in mental health.

# Credit Information

## CME Credit (Physicians)

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**Forms must be submitted within 30 days of completion of activity.** Participants will receive a certificate or statement of credit within 4–6 weeks following receipt of the credit request form and activity evaluation form. There is no fee for participation in this activity. The estimated time for completion of this activity is 60 minutes.

## psychCME TV Faculty Bios & Disclosures

### Mary B. O'Malley, MD, PhD

Dr. O'Malley is the Program Director of the only accredited Sleep Medicine Fellowship in Connecticut, at the Sleep Disorders Center, Norwalk Hospital, Norwalk, CT. She is an adjunct faculty member in the Department of Psychiatry at New York University, and teaches sleep medicine at New York University Medical Center and Cabrini Medical Center, New York, NY. She maintains a private practice in psychiatry in Fairfield, CT.

Dr O'Malley received her medical degree from Cornell University Medical College in New York and a PhD degree in neurobiology from The Rockefeller University, also in New York. She completed an internship in internal medicine at Norwalk Hospital, followed by a fellowship in sleep medicine and a residency in psychiatry at New York University/Bellevue Medical Centers.

Dr O'Malley is board certified in sleep medicine and psychiatry and is a Laughlin Fellow of the American College of Psychiatry. She has authored or coauthored publications in both basic and clinical research. She coauthored a pocket reference manual on psychiatry for clinicians in training, *The Saint Francis Guide to Psychiatry*, and has contributed chapters to other texts such as *Principles and Practices of Sleep Medicine*, and *Psychiatry On Call, Principles and Practice*. Dr O'Malley is a member of the American Psychiatric Association, American Medical Association, and the American Academy of Sleep Medicine.

### Daniel J. Buysse, MD

Dr. Buysse received his medical degree from the University of Michigan, and completed residency training in psychiatry and a post-doctoral clinical research training fellowship at the University of Pittsburgh. His fellowship also included clinical training in sleep medicine. He has received board certification from the American Board of Psychiatry and Neurology, and the American Board of Sleep Medicine.

Dr. Buysse has been on the faculty of the University of Pittsburgh School of Medicine since 1988, where he holds the title of Professor of Psychiatry. He is Program Director of the Clinical Neuroscience Research Center, a satellite of the University of Pittsburgh General Clinical Research Center. He has over 100 peer-reviewed publications and 40 invited publications on clinical sleep research topics, and is a frequent lecturer on topics pertaining to insomnia and sleep in depression.

Dr. Buysse's research interests focus on insomnia, sleep in aging, and sleep in psychiatric disorders, particularly sleep in depression. This work includes publications relating to the assessment, diagnostic reliability, and pharmacologic treatment of insomnia; circadian aspects of age-related sleep changes; and sleep correlates of treatment outcome in depression. His research has been supported by grants from the National Institute of Mental Health, the National Institute of Aging, the National Aeronautics and Space Administration, and the MacArthur Foundation.



Dr. Buysse practices clinical sleep medicine, focusing on the interface between sleep and psychiatric disorders. His particular clinical interest is the assessment and treatment of insomnia. Dr. Buysse is the Medical Director of the Sleep Evaluation Center in the Department of Psychiatry at the University of Pittsburgh. He is also Co-Director of a sleep medicine fellowship training program. Dr. Buysse is immediate Past President of the American Academy of Sleep Medicine, the largest professional organization representing sleep medicine clinicians and researchers.

### **Prakash S. Masand, MD, psychCME Chair**

Dr. Masand is Consulting Professor of Psychiatry at Duke University Medical Center in Durham, North Carolina. He is the section editor for *Current Psychiatry Reports* and has published more than 200 articles, abstracts, and book chapters. Dr. Masand is the psychCME Chair, host of psychCME TV, and editor of psychCME *REPORTS*.

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Dr. Buysse has disclosed that he serves as consultant to Actelion, Cephalon, Eli Lilly, Merck, Neurocrine, Pfizer, Respirex, Sanofi-Aventis, Servier, Sepracor, and Takeda.

Dr. Masand has disclosed that he receives grant and research support from AstraZeneca, Bristol-Myers Squibb, Forest Laboratories, GlaxoSmithKline, Ortho-McNeil, Janssen Pharmaceutica, and Wyeth. He is a consultant to Bristol-Myers Squibb, Forest Laboratories, GlaxoSmithKline, Health Care Technology, Janssen Pharmaceutica, Organon, Pfizer Inc., and Wyeth. He is on the speakers bureaus of Abbott Laboratories, AstraZeneca, Bristol-Myers Squibb, Eli Lilly and Company, Forest Laboratories, GlaxoSmithKline, Janssen Pharmaceutica, Novartis, Pfizer Inc., and Wyeth. Dr. Masand owns stock in psychCME, Inc.

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**Excessive Sleepiness:  
Assessing Its Impact  
on Patient Wellness**  
May 18, 2005

### **psychCME TV Learning Objectives**

I. Identify factors contributing to excessive sleepiness and their impact on patient wellness

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## psychCME TV Learning Objectives

II. Utilize screening tools for recognition and diagnosis of excessive sleepiness

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## psychCME TV Learning Objectives

III. Assess the role of pharmacological and non-pharmacological interventions in the treatment of excessive sleepiness

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## Learning Objective

Identify factors contributing to excessive sleepiness and their impact on patient wellness

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## Sleepiness or Excessive Sleepiness?

### Sleepiness

- The desire for sleep

### Excessive sleepiness

- Intense drive towards sleep even in inappropriate circumstances
- Difficulty maintaining wakefulness

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## What Does It Mean to Be “Tired?”

### Sleepiness

- The desire for sleep, or tendency to fall asleep

### Fatigue

- Sensation of weariness, tiredness, exhaustion, loss of energy; the desire to rest

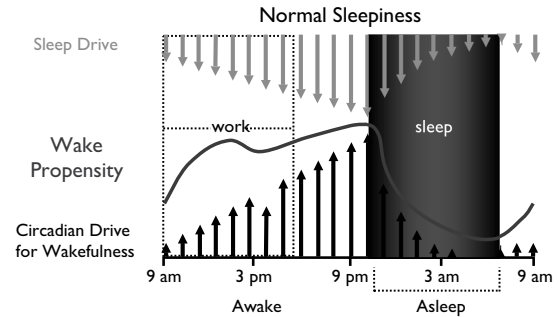
### Amotivation

- The lack of interest in doing things

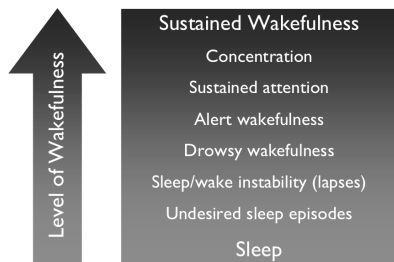
### Hypersomnia

- Prolonged sleep duration

## Physiologic Determinants of Sleepiness



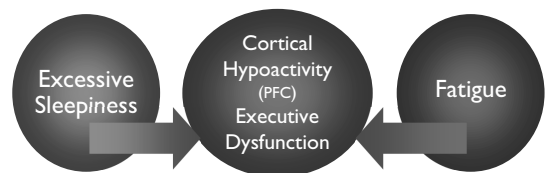
## Continuum of Sleep and Wakefulness



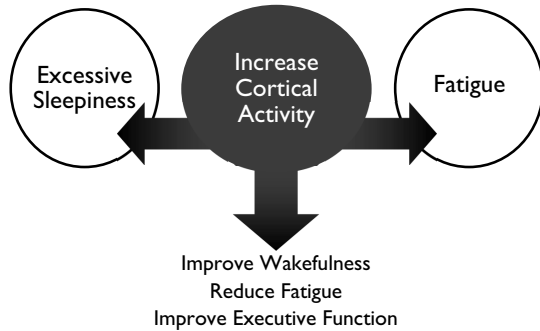
As sleepiness increases, the patient begins to suffer from impairments in concentration, attention, and level of alertness

Adapted from: Kryger MH, et al. *Principles and Practices of Sleep Medicine*. 2000.

## Increase Cortical Activity, Improve Executive Function



### Increase Cortical Activity, Improve Executive Function

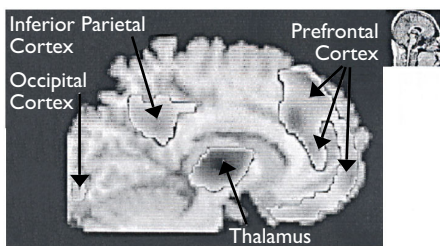


### The Role of the Prefrontal Cortex *Executive Function*

- Attention
- See big picture, remember details
- Strategic planning
- Maintain situational awareness
- Modulate impulsivity
- Facilitate social awareness
- Mood regulation

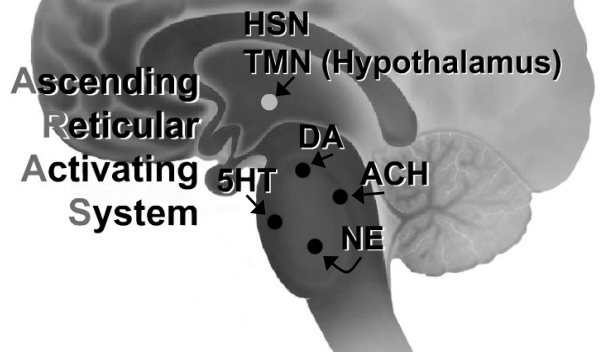
### Functional Changes Associated with Sleep Loss *PET Study of Healthy Adults*

- Sleep deprivation associated with decreased metabolism



Thomas M, et al. *Journal of Sleep Research*. 2000;9(4):335-352.

### Neurobiology of the Sleep-Wake Cycle Adenosine



### Histaminergic and Monoaminergic Pathways

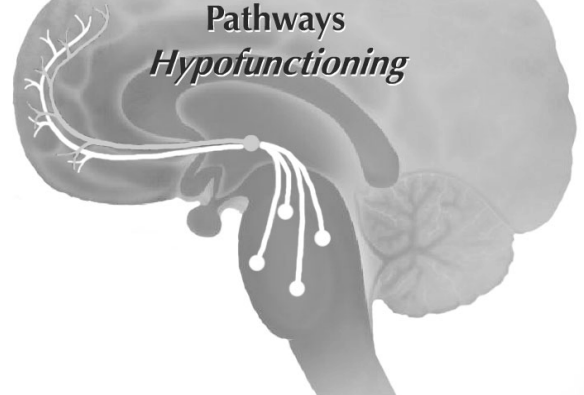


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### Histaminergic and Monoaminergic Pathways *Hypofunctioning*

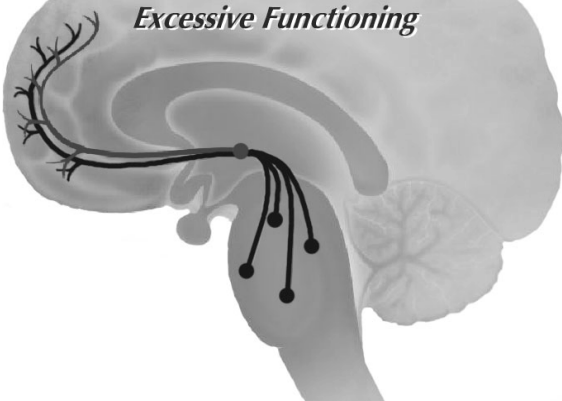


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### Monoaminergic Pathways *Excessive Functioning*



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### Impact of Drowsy Driving

- Estimates by US National Highway Traffic Safety Administration
  - 1-4% of highway crashes caused by sleepiness
  - Principal cause in 100,000 police-reported crashes
  - 4% of all fatal accidents caused by sleepiness
- A drowsy driver operating a motor vehicle at 60 mph in the right-hand lane (12' wide) of a divided highway with a breakdown lane (11' wide) can drift off the road at ~4° angle in less than 4 seconds

National Highway Traffic Safety Administration. 2002.  
Available at: <http://www.nhtsa.dot.gov>.



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### Drowsy Driving Risk Factors

- Late night/early morning driving (0000-0700 hr)
- Patients with untreated excessive sleepiness
- People who obtain 6 or fewer hours of sleep per day
- Young adult males
- Commercial truck drivers
- Night shift workers
- Residents post-call

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### How Risky Is Driving Post-Call?

Survey of 697 ER residents at Wayne State U:

- 17% had MVAs
- 6.7x more likely to fall asleep driving than prior to residency

Survey of anesthesia residents at U Penn:

- 17% had MVAs, all between 8-9 am
- 72% had near-miss MVAs, 33% > 5!

Kowalenko. *Acad Emerg Med.* 2000;7(5):451.  
 Marcus CL, Loughlin GM. *Sleep.* 1996;19:763-66.

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### Sleep Disorders Contributing to Excessive Sleepiness

- Insufficient sleep syndrome
- Primary sleep disorders causing disrupted nocturnal sleep
  - Obstructive sleep apnea syndrome (OSA)
  - Periodic limb movement disorders (PLMD)
  - Restless leg syndrome (RLS)
- Circadian rhythm sleep disorders
  - Shift work sleep disorder (SWSD)
  - Delayed sleep phase syndrome
  - Jet lag
- Neurological sleep disorders
  - Narcolepsy
  - Idiopathic hypersomnia

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### Other Disorders Contributing to Excessive Sleepiness

- Medical disorders
  - Infectious and post-infectious
  - Endocrine disorders (e.g., hypothyroidism)
  - Chronic fatigue syndrome
- Psychiatric disorders
  - Depression
  - Bipolar disorder
  - Anxiety disorders
- Medication and substance abuse disorders

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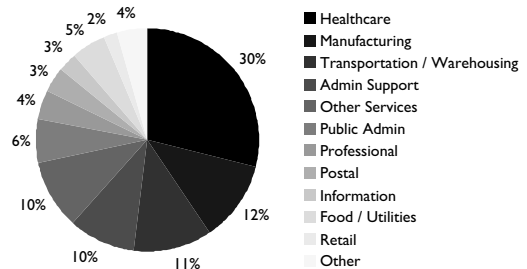


### Prevalence of SWSD

- Approximately 2% to 5% of the adult population report a sleep-related difficulty associated with working nonstandard hours (perhaps 1 in 50 of your patient population)
- Approximately 20 million Americans regularly work nonstandard schedules
- Surveys suggest up to 60% of night-shift workers may have SWSD

Gold DR, et al. *Am J Public Health*. 1992;106(2):93-9.  
*Diagnostic and Statistical Manual of Mental Disorders*, 4th Edition. 1994.  
 Ohayon MM, et al. *J Psychom Res*. 2002;53(1):547-54.

### Occupations Held by Patients with SWSD



### SWSD: Underdiagnosis and Impact

- Despite attempts to maximize sleep (e.g., sleep hygiene), many patients fail to adapt to working at night
- Associated with excessive sleepiness (ES) during the night shift and disturbed sleep during the day
- Can markedly interfere with social or occupational function
- Excessive sleepiness is widely underrecognized, underreported, and underdiagnosed

### Obstructive Sleep Apnea (OSA)

Symptoms of Patient      Complaints of Bedmate

- |                      |                       |
|----------------------|-----------------------|
| ● Daytime sleepiness | ● Loud snoring        |
| ● Morning headache   | ● Witnessed apnea     |
| ● Memory problems    | ● Restless sleep      |
| ● Dysphoria          | ● Personality changes |
| ● Nocturia           |                       |

## Obstructive Sleep Apnea (OSA)

- Risk factors: male, middle age, obesity, retrognathia, smoking, alcohol consumption, use of CNS suppressants, family history, "crowded" pharynx, large neck size (M > 17", F > 16")
- Consider the diagnosis of OSA when loud snoring is reported with any of the following:
  - Hypertension, especially resistant type
  - Frequent morning headaches and/or dry mouth
  - Unexplained pulmonary hypertension
  - Congestive heart failure
  - Drowsy driving
- Diagnosis: polysomnography

Flemons WW. *N Engl J Med*. 2002 Aug 15;347(7):498-504.  
 Nieto FJ, et al. *JAMA*. 2000 Apr 12;283(14):1829-36.  
 Guilleminault C, et al. *Otolaryngol Clin North Am*. 1998;31:1049-1065.

## Narcolepsy

- Signs and symptoms
  - Excessive sleepiness
  - Cataplexy (pathognomonic)
  - Hypnagogic hallucinations
  - Sleep paralysis
  - Disrupted nighttime sleep
- Onset typically in teen years, often earlier
- Frequently misdiagnosed
- Prevalence = 5 in 10,000

Scammell TE. *Ann Neurol*. 2003;53:154-166.

# Learning Objective 2

Utilize screening tools for recognition and diagnosis of excessive sleepiness

## Epworth Sleepiness Scale (ESS)

Situation	Chance of dozing (0-3)			
Sitting and reading	0	1	2	3
Watching television	0	1	2	3
Sitting inactive in a public place—for example, a theater or meeting	0	1	2	3
As a passenger in a car for an hour without a break	0	1	2	3
Lying down to rest in the afternoon	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after lunch (when you've had no alcohol)	0	1	2	3
In a car, while stopped in traffic	0	1	2	3
Total Score				

0 = would never doze      2 = moderate chance of dozing  
 1 = slight chance of dozing      3 = high chance of dozing

ESS total score  $\geq 10$  indicates possible excessive daytime sleepiness or sleep disorder

Johns MW. *Sleep*. 1991;14:540-545.

Reprinted with permission from the American Academy of Sleep Medicine.



## Excessive Sleepiness Workup

Follow the ESS self-rating scale with:

- Do you have problems falling asleep or staying asleep?
- What are your hours of sleep?
- Do you feel sleepy, drowsy, or tired during the day?
- Do you nap? Do naps help?
- Do you snore?
- What, if anything, are you taking to help you sleep?
- Have you ever had to fight to stay alert while driving?
- What medications are you currently taking?

Doghramji PP. *J Clin Psychiatry*. 2004;65(suppl 16):23-26.

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## Fatigue Severity Scale (FSS)

During the past week, I have found that	Disagree	←	→	Agree	
1. My motivation is lower when I am fatigued.	1	2	3	4	5 6 7
2. Exercise brings on my fatigue.	1	2	3	4	5 6 7
3. I am easily fatigued.	1	2	3	4	5 6 7
4. Fatigue interferes with my physical functioning.	1	2	3	4	5 6 7
5. Fatigue causes frequent problems for me.	1	2	3	4	5 6 7
6. My fatigue prevents sustained physical functioning.	1	2	3	4	5 6 7
7. Fatigue interferes with carrying out certain duties and responsibilities.	1	2	3	4	5 6 7
8. Fatigue is among my 3 most disabling symptoms.	1	2	3	4	5 6 7
9. Fatigue interferes with my work, family, or social life.	1	2	3	4	5 6 7
Total Score					

FSS mean score = total score for 9 items divided by 9

FSS mean score >4 indicates severe fatigue

Krupp LB, et al. *Arch Neurol*. 1989;46:1121-1123.

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## SIFT

### Assessment of Sleepiness/Tiredness

- **Situation** — When does the patient feel sleepy/tired? (e.g., watching TV, sitting inactive in a public place, lying down to rest in the afternoon, or in a car while stopped for a few minutes in traffic)
- **Impairment** — To what extent does sleepiness interfere with daily life? (e.g., social and occupational consequences of the symptom)
- **Frequency** — How often does the patient feel sleepy? (e.g., every day, once a week, etc.)
- **Tools** — Use tools like the Epworth Sleepiness Scale (ESS) to help determine the presence and degree of excessive sleepiness

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# Learning Objective 3

Assess the role of pharmacological and non-pharmacological interventions in the treatment of excessive sleepiness

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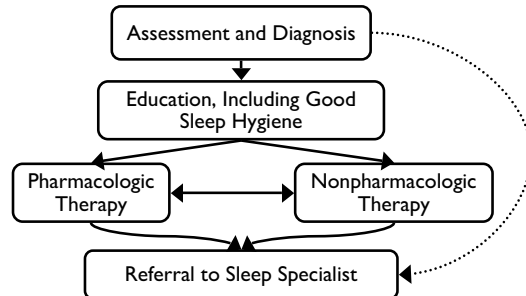
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## Management of Sleep and Wakefulness Complaints



Kupfer DJ, Reynolds CF 3rd. *N Engl J Med.* 1997;336(5):341-46.  
Consensus Conference. *JAMA.* 1984;251:2410-14.

## Treatment Options for ES

Condition	Nonpharmacologic	Pharmacologic
Insufficient Sleep Syndrome	Increase sleep time, e.g., naps	Not recommended
OSA	Nasal CPAP	Modafinil* (for residual ES despite CPAP)
SWSD	Naps, avoid a.m. sunlight, protected sleep environment	Methylphenidate, modafinil*, melatonin, hypnotics
Narcolepsy	Prophylactic naps	Modafinil*, dexamphetamine*, methylphenidate*
Hypersomnia, 2nd Psychiatric Disorders	Bright light therapy (SAD)	Antidepressants, modafinil, methylphenidate

\* FDA Approved

DeBattista C, et al. *J Clin Psychiatry.* 2003;64:1057-1064.

Fava M. *J Clin Psychiatry.* 2004;65 suppl 16:27-32.

Turek FW, et al. *Sleep Med.* 2004 Nov;5(6):523-32.

Hart CL, et al. *Exp Clin Psychopharmacol.* 2003 Nov;11(4) 259-68.

Banerjee D, et al. *Sleep Med Rev.* 2004 Oct;8(5):339-54.

## Principles of Good Sleep Hygiene

- Spend 7-8 hours in bed
- Maintain regular sleep/wake schedule
- Discontinue caffeine 4 to 6 hours before bedtime and minimize total daily use
- Avoid nicotine, especially near bedtime and upon night awakenings
- Avoid alcohol and heavy meals before sleep
- Get regular exercise
- Minimize noise, light, and excessive temperatures during the sleep period

Blake DD, et al. *Psychol Rep.* 1998;83(3):1175-8.  
National Heart, Lung, and Blood Institute Working Group on Insomnia. 1998.

## Pharmacologic Agents Studied for ES

Drug	Schedule	FDA-Approved Indication*	FDA-Approved Dosages
Dextro-amphetamine	C-II	Narcolepsy, ADHD with hyperactivity	5-60mg/day 2.5-40mg/day
Methylphenidate	C-II	ADHD, narcolepsy	5-60mg/day
Modafinil	C-IV	ES associated with narcolepsy, OSA, and SWSD*	200mg/day given in morning

\* Physician's Desk Reference. 2003.



### Pharmacologic Comparisons of Modafinil and Amphetamines

	Methylphenidate	Amphetamines	Modafinil
Increase wakefulness	↑↑	↑↑	↑↑
Increase locomotor activity	↑↑	↑↑	↑/0
Actions modified by DA antagonist	↓	↓	0
Stereotypy	↑↑	↑↑	↑/0
Anxiogenic		↑↑	0
Increase BP/HR	↑	↑	0
NREM rebound		↑↑	0

Stahl S. *Essent Psychopharmacol*. 2000.

### CNS Stimulants Considerations for Use

- Mechanism: release of presynaptic dopamine, norepinephrine stores; reuptake blockade
- Side effects: anxiety/nervousness; restlessness; insomnia; headache; tremor, dyskinesia; tachycardia, hypertension; psychosis; abuse potential
- Potential benefit of “drug holidays”

### Modafinil Considerations for Use

- Mechanism: unclear; may affect orexin neurons in hypothalamus; weak DA, NE activity
- Side effects: headaches; nausea; anorexia; dry mouth; inhibition of CYP 2C9, mild induction of 1A2, 3A4, 2B6

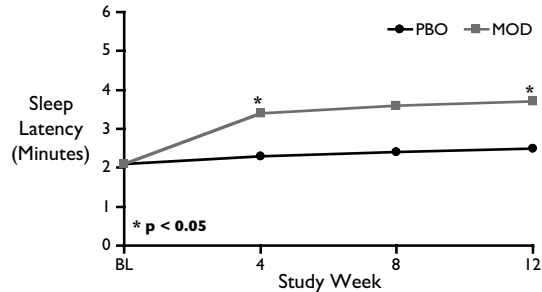
### Treatment of SWSD

- Improve sleep hygiene
- Light therapy
- Hypnotics to facilitate sleep at unfavorable circadian phase
- Melatonin
- Alerting agents during work
  - Wake-promoting agent
  - CNS stimulants
  - Caffeine

Richardson GS, Malin HV. *J Clin Neurophysiol*. 1996 Jan;13(1):17-31.  
Wagner DR. *Neurol Clin*. 1996 Aug;14(3):651-70.

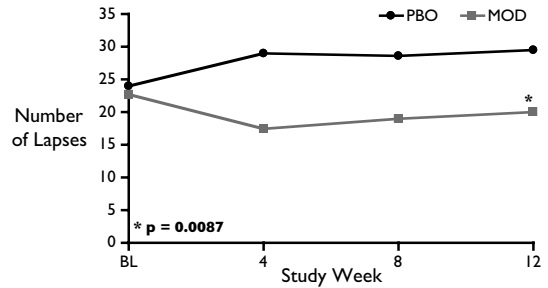


### Modafinil and Wakefulness in SWSD Mean Sleep Latency



Czeisler CA, et al. *Sleep*. 2004 May;27(3):374-81.

### Modafinil and Attention in SWSD Mean Lapses of Attention



Czeisler CA, et al. *Sleep*. 2004 May;27(3):374-81.

### Treatment of OSA

- Nonspecific: weight loss, avoidance of CNS depressants
- Mechanical
  - Nasal continuous positive airway pressure (CPAP)
  - Surgery of the airway (UPPP, hyoid advancement)
  - Dental appliance
  - Weight loss
- Residual sleepiness despite compliance with effective mechanical treatments is still seen in some patients
  - May cause significant impairment in safety and social/occupational function

Flemons WW. *N Engl J Med*. 2002 Aug 15;347(7):498-504.  
Robinson, Guilleminault. *Otolaryngol Clin North Am*. 1998;31:1049-1065.

### ES Symptoms May Persist Despite CPAP

Possible causes:

- Inadequate total sleep time
- Inadequate titration of CPAP pressure
- Coexistent illnesses or medications
- Hypoxic brain injury prior to CPAP

### Treating Residual ES in OSA

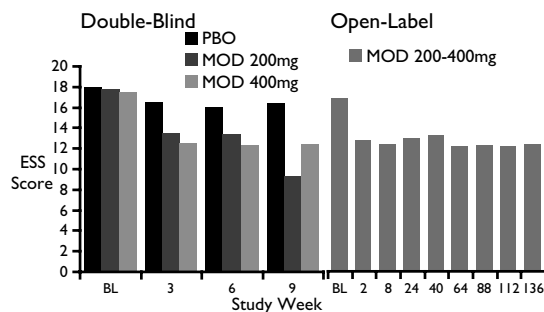
- Optimize CPAP therapy
- Increase total sleep time
- Medications (e.g., dopamine agonists)
- Wake-promoting agents

### Treatment of ES in Narcolepsy Standards of Practice Committee

- Modafinil  
(high degree of clinical certainty)
- Amphetamines and methylphenidate  
(moderate degree of clinical certainty)

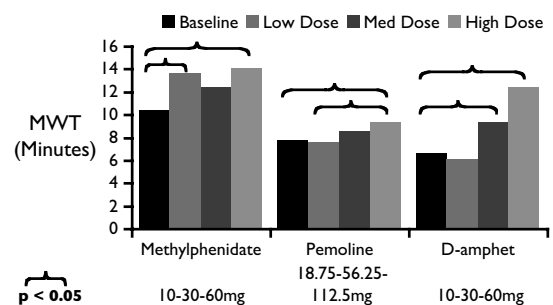
\* Comparative safety and efficacy of the stimulant medications not defined  
AASM Standards of Practice Committee. *Sleep*. 2001.

### Long-Term Improvement in Narcolepsy with Modafinil



Schwartz JR. *Expert Opin Pharmacother*. 2005;6(1):115-129.

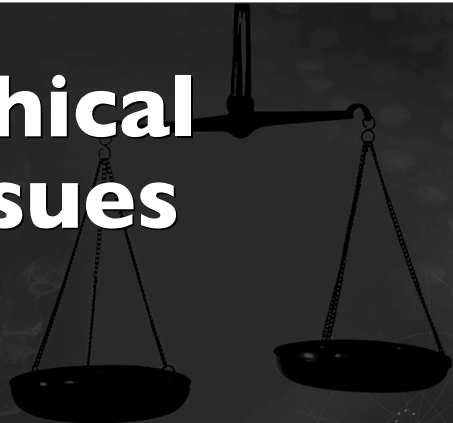
### Improvement in Treatment of Narcolepsy with Stimulants



Mitler MM, et al. *J Clin Neurophysiol*. 1990 Jan;7(1):93-118.



# Ethical Issues



## Clinical Pearls Recognition

- Boring situations unmask physiological sleepiness, they don't create it
- The circadian rhythm drives wakefulness during the day, and favors sleepiness and impaired performance between 12-7 am
- To differentiate sleepiness from fatigue: When you climb a flight of stairs, do you need to nap? Or to rest?
- Sleepiness impairs executive functioning no matter what the cause of sleepiness

## Clinical Pearls Treatment

- Treat associated medical / psychiatric conditions
- Ensure adequate opportunity and circumstances for sleep (minimize sleep deprivation)
- Modafinil and traditional stimulants
  - Primary treatment for narcolepsy, idiopathic hypersomnia
  - Adjunctive treatment for sleep apnea, shift work, depression



**A Surgeon General's Perspective  
on Cultural Competency:  
What Is It and How Does It  
Affect Diagnosis and Treatment  
of Major Depressive Disorder?**  
June 1, 2005

## Post-Test

Participants are required to complete the post-test to assess their achievement of the educational objectives for this activity. To obtain a certificate or statement of credit, you must complete the post-test and indicate your answers on the **Post-Test Responses** section found on the credit request form. You must complete both this post-test and the evaluation to receive credit. A score of 70% is required for credit.

### Excessive Sleepiness: Assessing Its Impact on Patient Wellness

- Which of the following functions is regulated by the prefrontal cortex?
  - Attention
  - Respiration
  - Short-term memory
  - Vision
- Which of the following is NOT a component of tiredness?
  - Sleepiness
  - Fatigue
  - Amotivation
  - Hyposomnia
- According to estimates by the National Highway Traffic Safety Administration, what percentage of fatal auto accidents are caused by sleepiness?
  - 2%
  - 4%
  - 6%
  - 10%
- Which disorder is positively associated with excessive sleepiness?
  - Obstructive sleep apnea
  - Narcolepsy
  - Shift work sleep disorder
  - Psychiatric disorders
  - All of the above
- True or False: Excessive sleepiness is widely recognized and diagnosed.
  - True
  - False
- Which of the following is NOT a risk factor for obstructive sleep apnea?
  - Smoking
  - Alcohol consumption
  - Female gender
  - Obesity
  - Family history
- The SIFT acronym for assessing sleepiness/tiredness represents which four elements?
  - Situation, Impairment, Frequency, Tiredness
  - Sleepiness, Impairment, Fatigue, Tiredness
  - Situation, Impairment, Frequency, Tools
  - Sleepiness, Impairment, Frequency, Tools
- Which of the following are components of good sleep hygiene?
  - 7–8 hours in bed
  - Regular exercise
  - One alcoholic beverage just prior to bedtime
  - A and B
  - B and C
- Which is an FDA-approved treatment for improving wakefulness in patients with excessive sleepiness due to shift work sleep disorder?
  - Dexamphetamine
  - Modafinil
  - Methylphenidate
  - All of the above
- Which of the following recommendations is/are essential components in treating excessive sleepiness?
  - Treating associated medical conditions
  - Promoting sleep hygiene
  - Prescribing appropriate pharmacotherapy
  - Asking sleep-related questions
  - All of the above





# CE Credit Request Form

## Excessive Sleepiness: Assessing Its Impact on Patient Wellness

This continuing education activity is provided by



### A CME/CNE/CEP/NASW/CCMC/CPE Satellite Broadcast

To receive CE credit, you must complete both this form and an evaluation form, and return the completed forms via mail to CME Outfitters, 2400 Research Boulevard, Suite 425, Rockville, MD 20850; or, FAX to 240.243.1033 for fastest service. Forms must be submitted within 30 days of completion of activity. A certificate or statement of credit will be mailed to you within 4–6 weeks of our receiving this form and the evaluation form.

**PLEASE PRINT CLEARLY (Form must be filled out completely to process certificate)**

First Name, MI, Last Name: \_\_\_\_\_

Specialty Area: \_\_\_\_\_

I am a: ☐ U.S. Licensed Physician ☐ Physician Assistant ☐ Nurse Practitioner ☐ Nurse ☐ Psychologist  
☐ Social Worker ☐ Pharmacist ☐ Other: \_\_\_\_\_

Degree: ☐ MD ☐ DO ☐ PhD ☐ NP ☐ RN ☐ PharmD ☐ MSW ☐ Other: \_\_\_\_\_

I participated in a: ☐ LIVE broadcast ☐ LIVE webcast ☐ LIVE audio feed ☐ Internet archive ☐ Rebroadcast/Videotape

Participation Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Complete Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Business Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Type of CE credit requested: ☐ CME/Physicians (max. 1.0 \_\_\_\_\_) ☐ CNE/Nurses (1.2) ☐ CEP/Psychologists (1.0)  
☐ NASW/Social Workers (1.0) ☐ CPE/Pharmacists (1.0) ☐ Others (1.0 CME Attendance Certificate)

NOTE: Certified Case Managers are only required to complete the attached CCMC Verification of Completion and CE Activity Evaluation Forms to receive credit. CCMs should only use this form to request additional types of CE credit.

**Please see booklet pages 2–3 for credit information and requirements.**

How long did it take you to complete this activity? \_\_\_\_\_ hours \_\_\_\_\_ minutes

**Post-Test Responses** (Enter letter of correct response; 70% score required for credit):

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_ 5. \_\_\_\_\_ 6. \_\_\_\_\_ 7. \_\_\_\_\_ 8. \_\_\_\_\_ 9. \_\_\_\_\_ 10. \_\_\_\_\_

How did you learn about this continuing education event?

☐ Brochure/direct mail ☐ Brochure/from rep ☐ Email ☐ Internet ☐ Colleague ☐ Fax ☐ Other: \_\_\_\_\_

Please rate your interest in participating in future psychCME educational activities (1=highly interested, 5=uninterested): \_\_\_\_\_

What formats do you prefer for learning? (Please rank the top three; 1 = most preferred):

\_\_\_\_\_ Symposium \_\_\_\_\_ Audioconference \_\_\_\_\_ Internet \_\_\_\_\_ CD-ROM  
\_\_\_\_\_ Journal \_\_\_\_\_ Satellite Broadcast \_\_\_\_\_ Monograph \_\_\_\_\_ Other: \_\_\_\_\_

As a result of my participation in this activity, I will commit to:

- Sharing information from this activity with staff and colleagues. ☐ Yes ☐ No
- Utilizing the assessment tools described in this activity to develop an individualized management/care plan for each of my patients. ☐ Yes ☐ No
- Analyzing overall improvement in patient management/care through use of the therapeutic options described in this activity. ☐ Yes ☐ No

**In order to measure the long-term effectiveness of our activities, would you be willing to participate in three follow-up surveys (2-week, 6-week, 3-month) regarding the impact of this educational activity on your clinical practice?** ☐ Yes ☐ No

(If yes, please be sure to fill in email address above. Survey volunteers will be selected at random.)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# CE Activity Evaluation

## Excessive Sleepiness: Assessing Its Impact on Patient Wellness

### A CME/CNE/CEP/NASW/CCMC/CPE Satellite Broadcast

This continuing education activity is provided by



To receive CE credit, you must complete both this form and a credit request form, and return the completed forms via mail to CME Outfitters, 2400 Research Boulevard, Suite 425, Rockville, MD 20850; or, FAX to 240.243.1033 for fastest service. Forms must be submitted within 30 days of completion of activity. A certificate or statement of credit will be mailed to you within 4–6 weeks of our receiving this form and the credit request form.

1. The content level was: ☐ Too easy ☐ About right ☐ Too difficult

Strongly Agree Strongly Disagree

2. Objectives were related to the overall purpose/goal of the activity (to better recognize the impact of excessive sleepiness on patient wellness). 5 4 3 2 1

3. The course met the stated objectives:

- Identify factors contributing to excessive sleepiness and their impact on patient wellness. 5 4 3 2 1
- Utilize screening tools for recognition and diagnosis of excessive sleepiness. 5 4 3 2 1
- Assess the role of pharmacological and non-pharmacological interventions in the treatment of excessive sleepiness. 5 4 3 2 1

4. The educational materials were useful. 5 4 3 2 1

5. The visual aids were useful and appropriate. 5 4 3 2 1

6. The overall activity was excellent. 5 4 3 2 1

7. The physical environment/format was conducive to learning. 5 4 3 2 1

8. Rate the quality of the faculty member(s) listed below, from 5 (Excellent) to 1 (Poor):

Speaker	Content	Clinical Relevance	Teaching Strategies	Level of Expertise
Mary B. O'Malley, MD, PhD	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
Daniel J. Buysse, MD	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
Prakash S. Masand, MD	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1

9. Will you change the way you practice based on this activity? ☐ Yes ☐ No

If no, is it because you already practice this way? ☐ Yes ☐ No

If no, please explain: \_\_\_\_\_

10. Do you feel the activity was balanced and objective? ☐ Yes ☐ No

If no, please state reasons: \_\_\_\_\_

11. Do you feel the activity was free of commercial bias? ☐ Yes ☐ No

If no, did it negatively impact the educational value of this activity? ☐ Yes ☐ No

If yes, please state reasons: \_\_\_\_\_

12. What was the most useful information you gained from this activity? \_\_\_\_\_

13. Suggested topics for future activities: \_\_\_\_\_

14. General comments/suggestions: \_\_\_\_\_

15. I participated in a: ☐ LIVE broadcast ☐ LIVE webcast ☐ LIVE audio feed ☐ Internet archive ☐ Rebroadcast/Videotape

16. Participation date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

17. I am a: ☐ U.S. Licensed Physician ☐ Physician Assistant ☐ Nurse Practitioner ☐ Nurse ☐ Psychologist  
☐ Social Worker ☐ Case Manager ☐ Pharmacist ☐ Other: \_\_\_\_\_

*Thank you for your feedback. Your comments will be reviewed carefully and ultimately used to guide the development of our future continuing education activities.*



CME Outfitters, LLC  
2400 Research Boulevard, Suite 425  
Rockville, Maryland 20850  
T 877.CME.PROS  
V 240.243.1300  
F 240.243.1033

**Note: ONLY Certified Case Managers wishing to receive CCMC credit for this activity should fill out and return this form. Please send completed form to the address listed below, NOT to CME Outfitters, LLC.**

## FOR CERTIFIED CASE MANAGER USE ONLY

**CCMC**

### VERIFICATION OF COMPLETION (Please Print or Type All Information)

#### SPONSOR INFORMATION (To be completed by program/activity sponsor.)

CME Outfitters LLC  
Sponsoring Organization  
2400 Research Blvd Ste 425  
Street Address  
Rockville MD 20850  
City/State/Zip Code

00063520  
Sponsor Code  
Richard Vanderpool  
Contact Person  
877.263.7767  
Phone Number for Contact Person

#### PROGRAM/ACTIVITY INFORMATION (To be completed by program/activity sponsor.)

Excessive Sleepiness: Assessing Its Impact on Patient Wellness - various 2005  
Program/Activity Title  
Through 12/31/05  
Program/Activity Date or Date of Completion  
6352033864  
Approval Number  
Signature of Individual in Charge of Verifying Attendance/Completion  
1.00  
Clock Hours Attended/Completed  
5/18/05  
Date of Signature

#### PARTICIPANT INFORMATION (To be completed by participant prior to submission.)

Name  
Street Address  
City/State/Zip Code

Certificate Number  
Daytime Telephone Number

#### MAIL TO:

To have these clock hours added to your CCM certification file, please send a copy of this form to **CCMC, 1835 Rohlwing Road, Suite D, Rolling Meadows, IL 60008**. It is best to submit this documentation as activities are completed or at least on an annual basis. This form is for pre-approval by CCMC only and will only be added to your certification file with them. If you hold certification from other organizations, you will need to submit verification of attendance/completion according to their requirements.





# psychCME TV Satellite Broadcast Attendance Form for Groups

Please complete and FAX to **240.243.1033**

**Broadcast Title and Faculty:**

Excessive Sleepiness: Assessing Its Impact on Patient Wellness

with Mary B. O'Malley, MD, PhD, Daniel J. Buysse, MD, and Prakash S. Masand, MD

Site/Institution Name: \_\_\_\_\_

Practice Setting: ☐ Community Mental Health ☐ State Mental Health ☐ Private Practice ☐ Primary Care ☐ Other: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Site Coordinator: \_\_\_\_\_ Phone: \_\_\_\_\_

Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Check here to receive a free ☐ videotape ☐ CD-ROM of this CE activity.

Attendee Name	Please Circle Discipline			
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____
_____	MD	RN	Pharm	Other: _____

Please FAX completed form to 240.243.1033 and use additional sheets as necessary.  
Questions? Call 877.CME.PROS. Thank you for participating in psychCME TV!